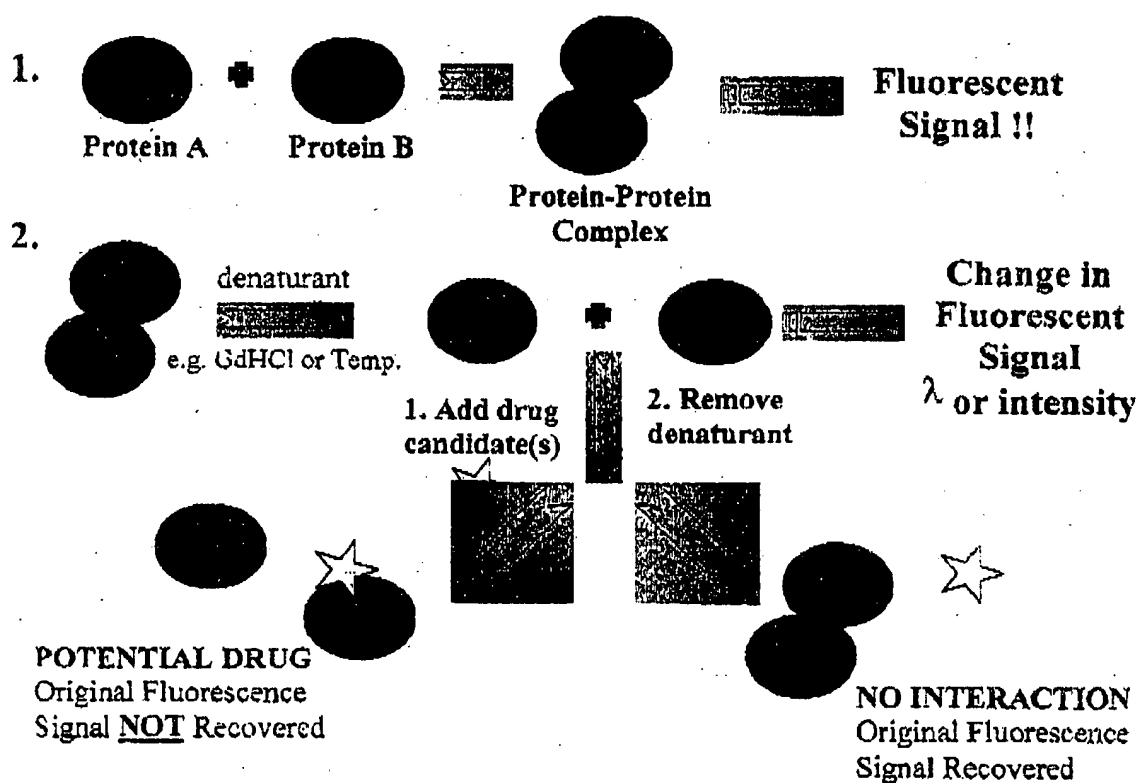


FIGURE 1

Proposed Assay

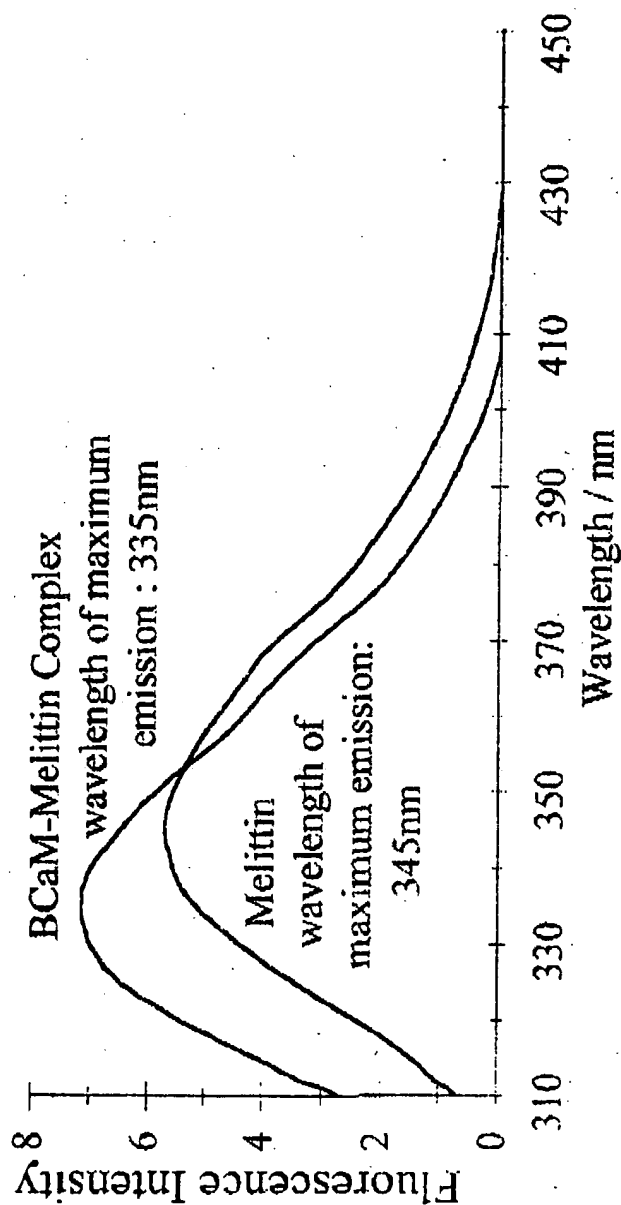


ENTRAP PROTEIN-PROTEIN COMPLEX IN A SOL-GEL DERIVED GLASS

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FIGURE 2

Fluorescence Signal from BCaM-Melittin System



FIGURES 3

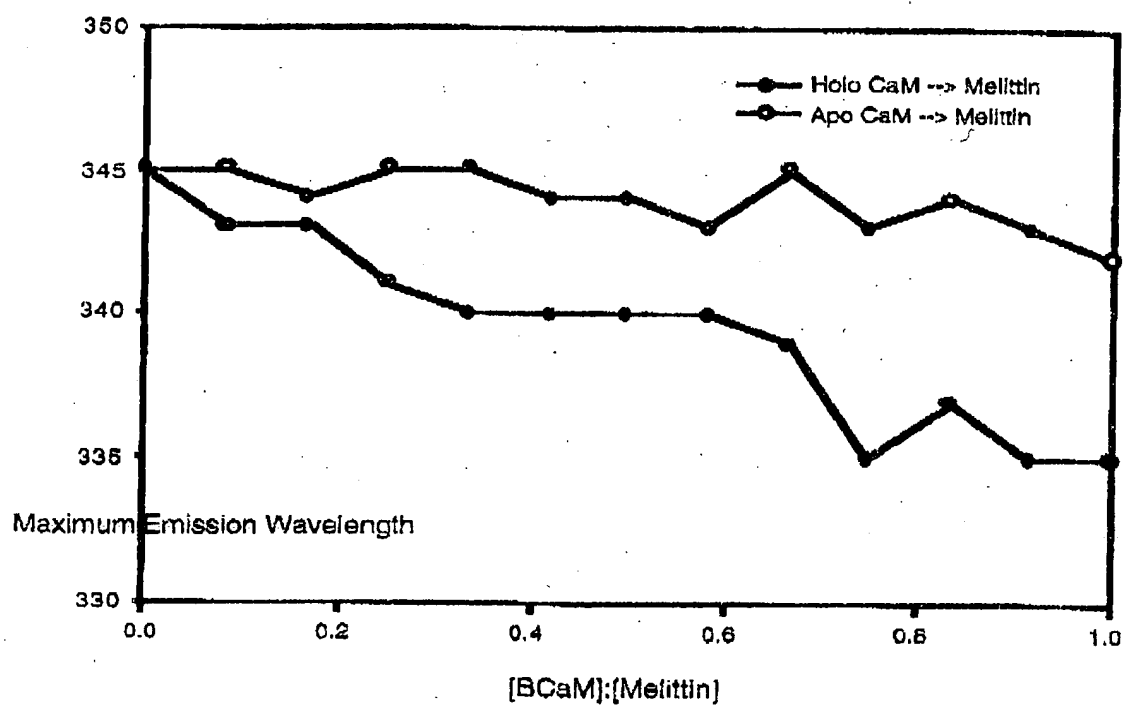
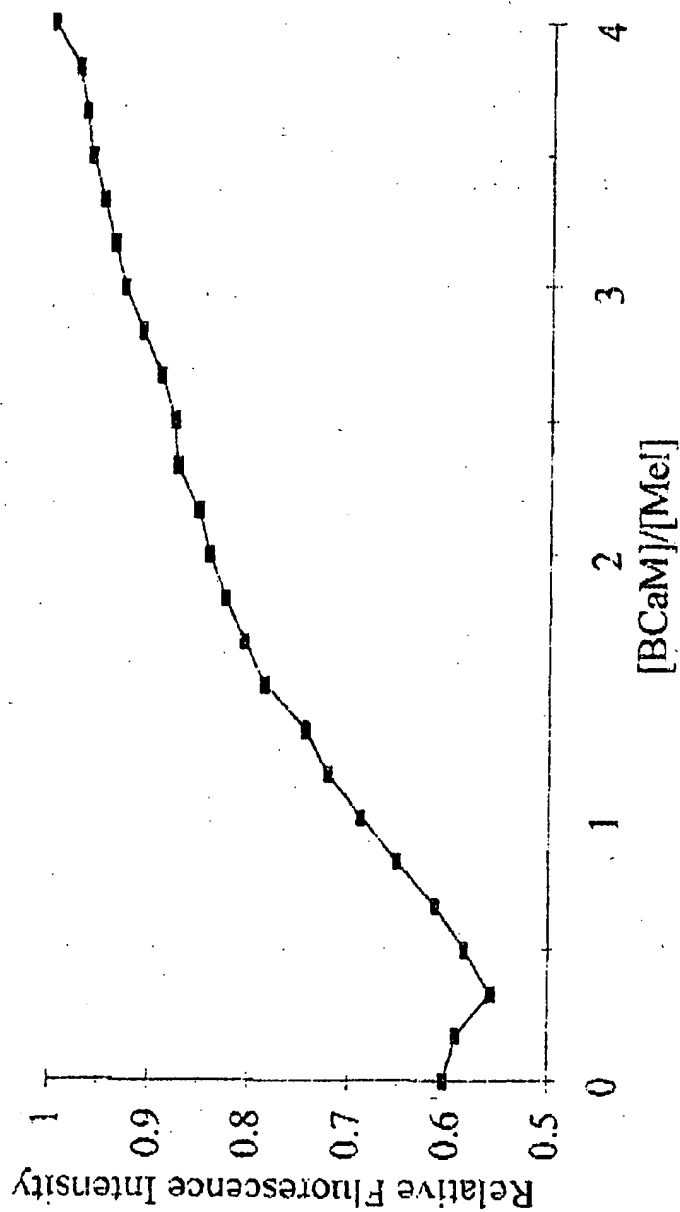


FIGURE 4



The Sol-Gel Process

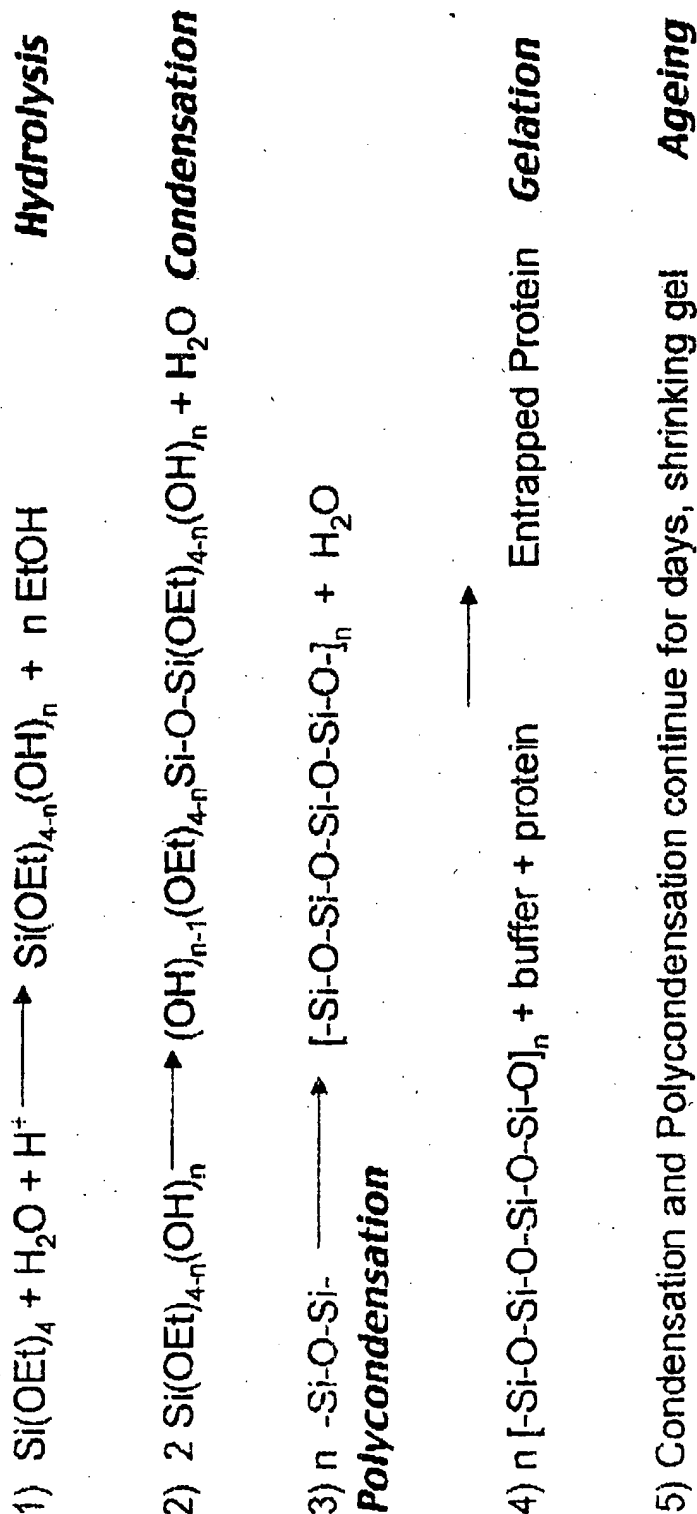
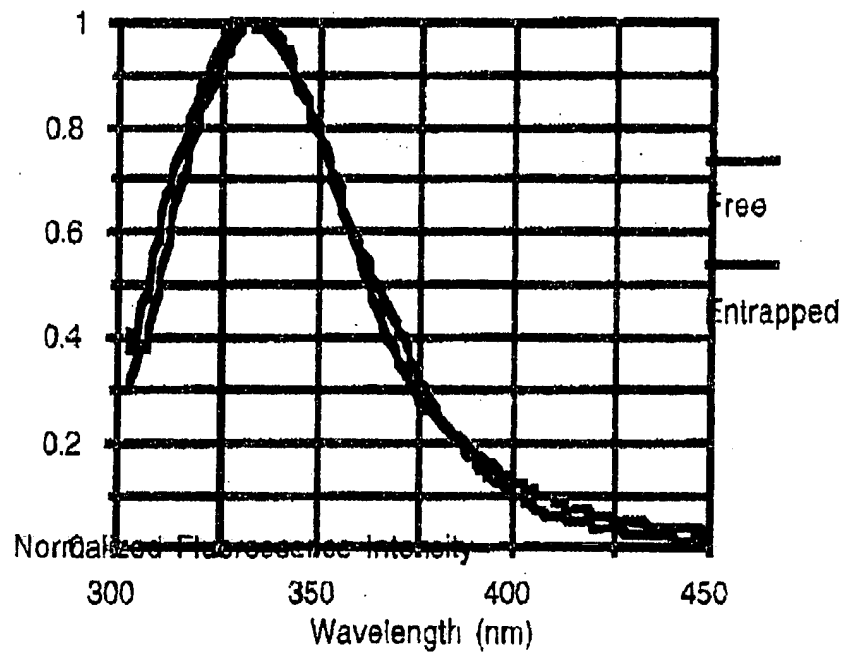


FIGURE 5

FIGURE 6



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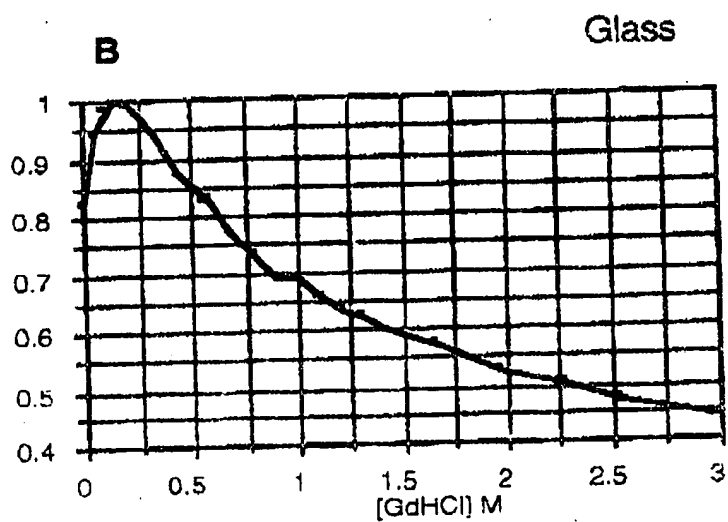
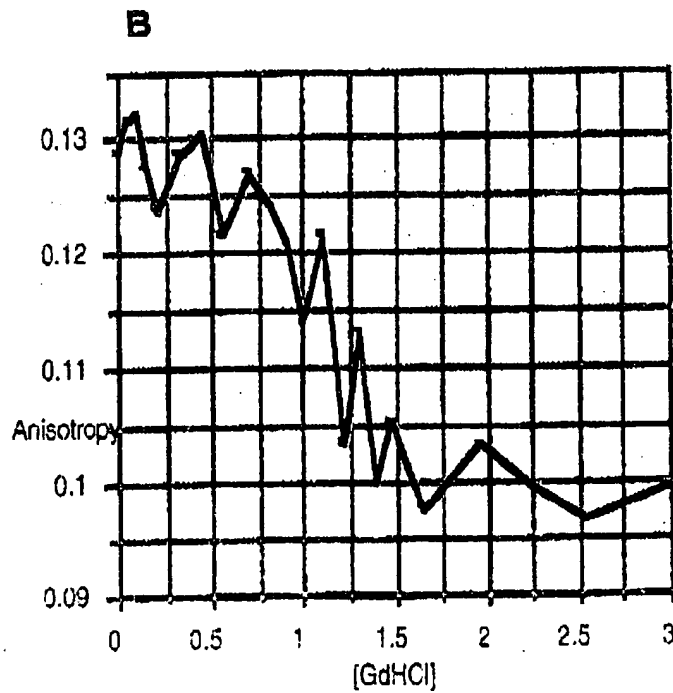
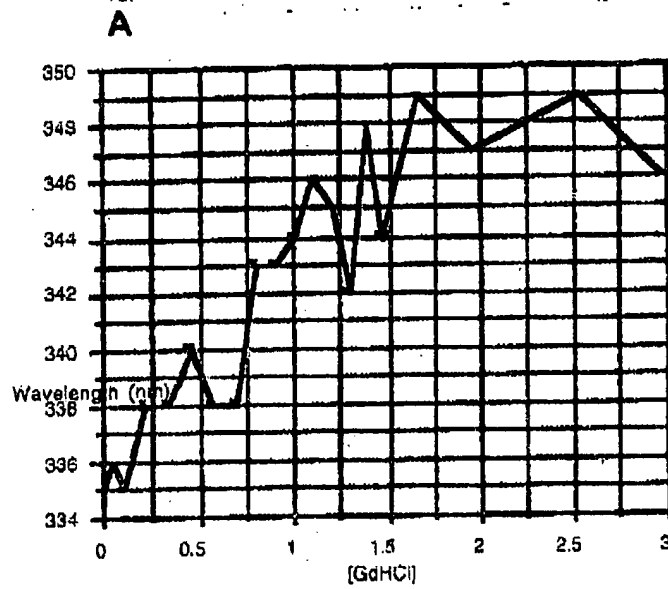


FIGURE 8A-B



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Reversibility of Denaturation for an Entrapped Protein

FIGURE 9

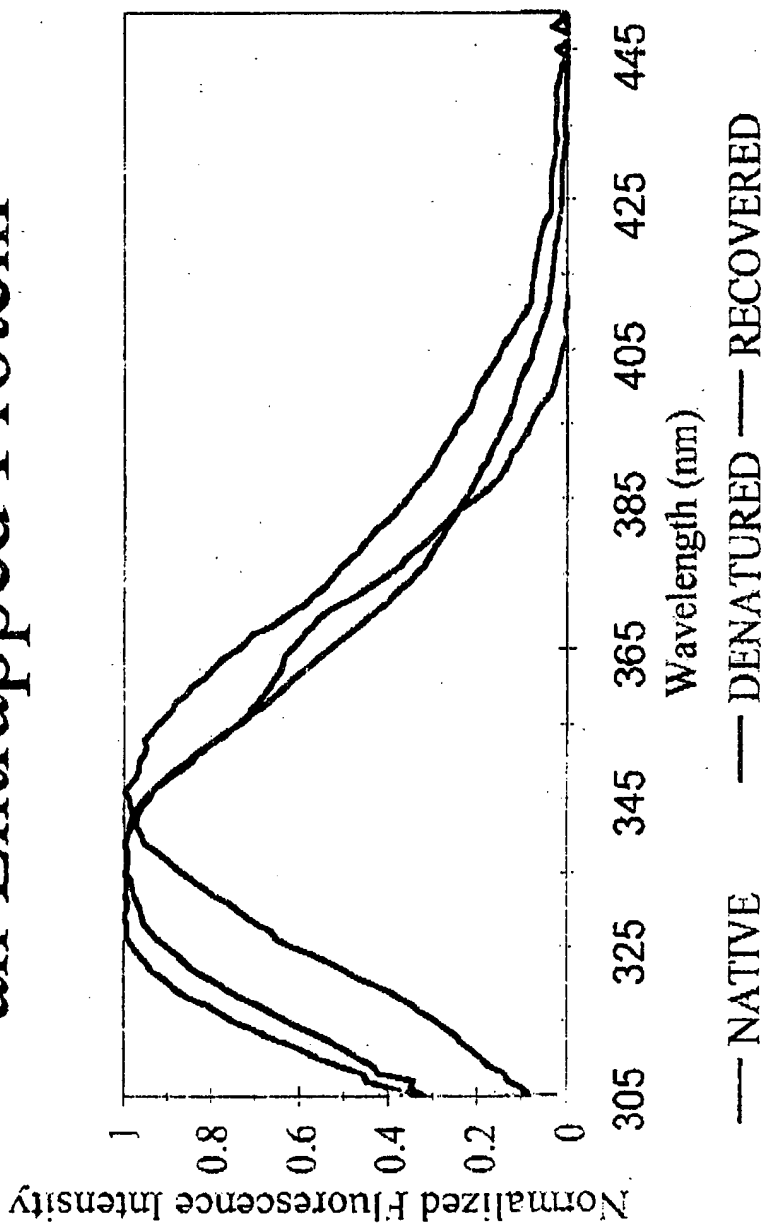


FIGURE 10A-B

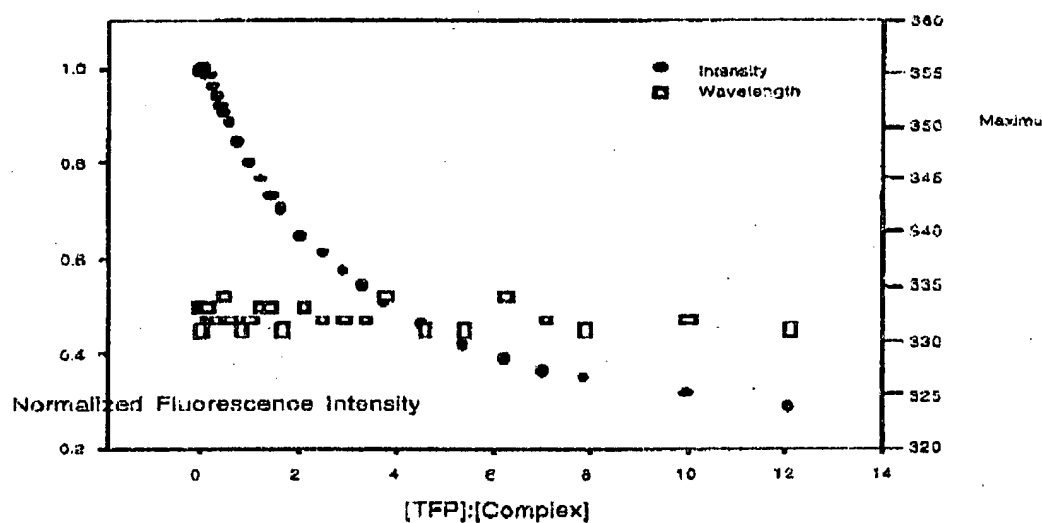
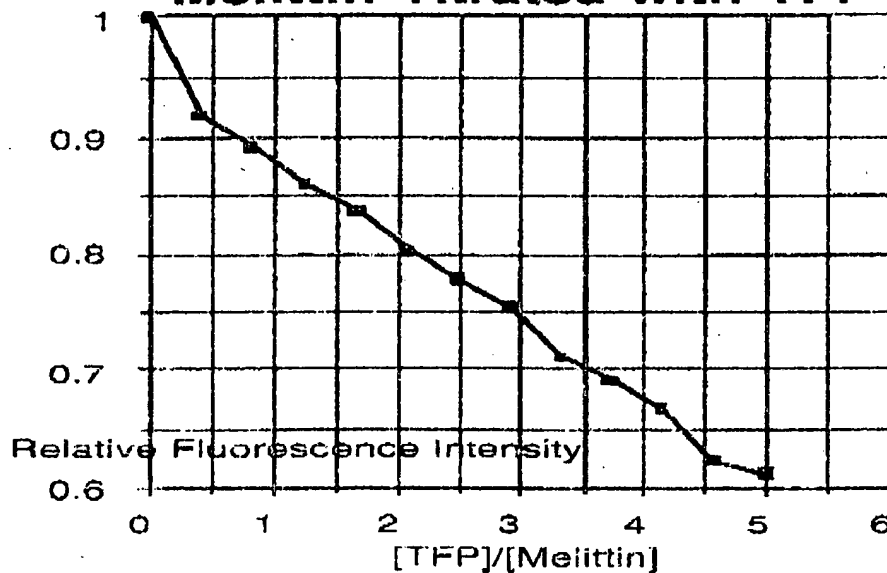
A TFP Added to BCaM-Melittin Complex
Excited at 295 nm, in the Presence of Ca^{2+} **B** Melittin Titrated with TFP

FIGURE 11

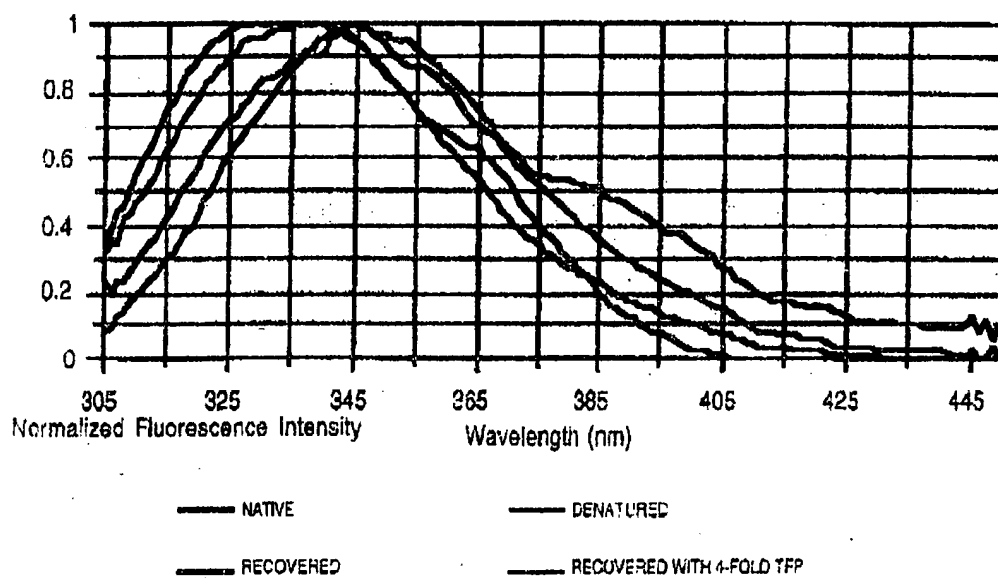


FIGURE 12

Proof of Concept of the Assay

Solution	Anisotropy	Wavelength (nm)
Native	0.127	335
Denatured	0.129	334
Recovered	0.099	346
Denatured	0.136	331
Recovered with TFP	0.115	346
	0.121	346

Florescence Resonance Energy Transfer (FRET)

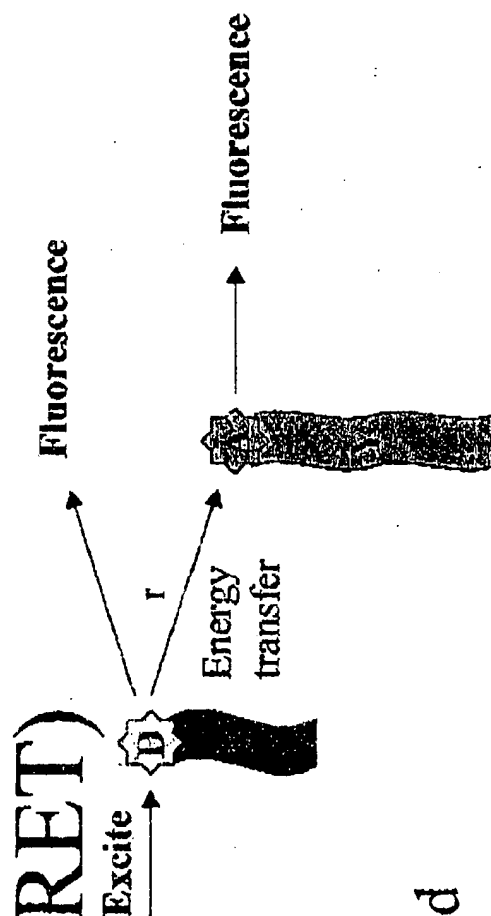


FIGURE 13

Donor excited

Emits at λ_D that overlaps Acceptor absorbance

Acceptor excited and emits at a longer λ_A

Efficiency of energy transfer dependent on distance between donor and acceptor

Förster distance (R_0) = 50% efficiency

FIGURE 14

**Donor attached to Protein A, Acceptor
attached to Protein B**

Efficiency of energy transfer (E) related to
distance (r) by;
$$\frac{R_0^6}{R_0^6 + r^6}$$

- Use donor molecule which absorbs at longer λ to TFP \therefore avoid exciting TFP

FIGURE 15

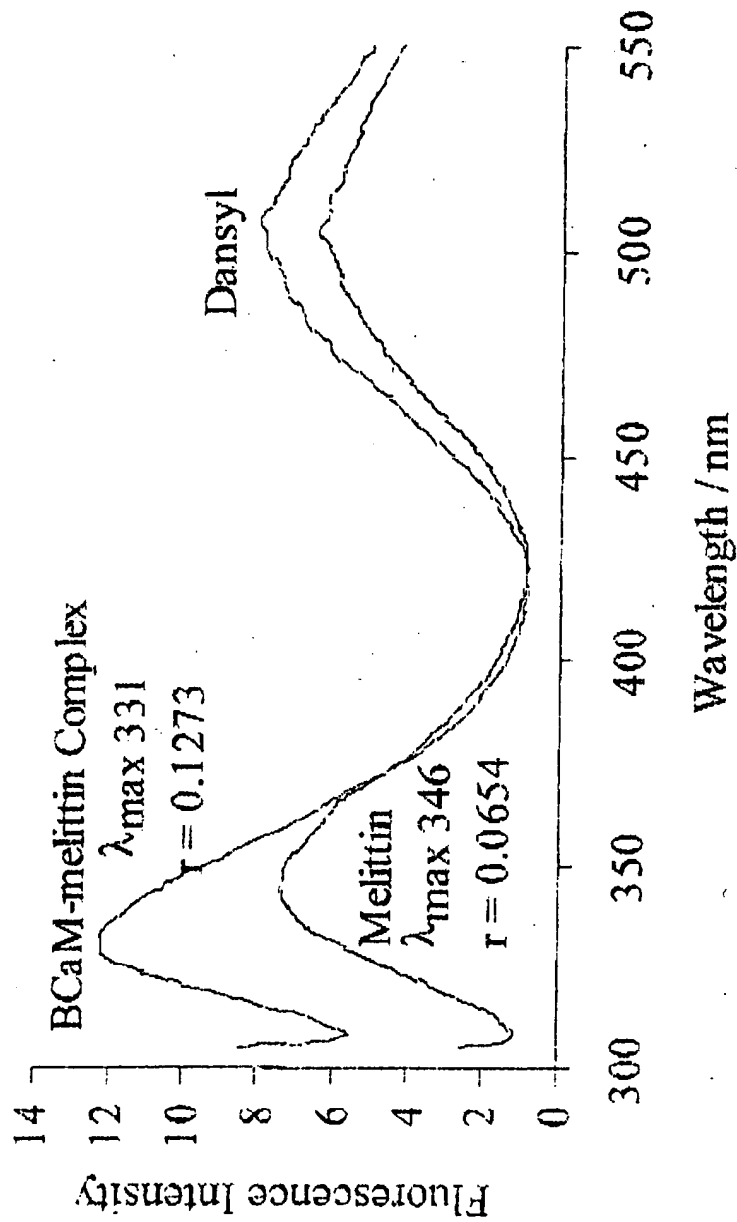
MelittinBCaM

- | | |
|-------------------|--------------------------|
| Energy Donor | • Energy Acceptor |
| • Dansyl Chloride | • Fluorescein derivative |
| • Absorbs @ 370nm | • Absorbs @ 494nm |
| • Emits @ 500nm | • Emits @ 518nm |

$$R_0 = 3.3 - 4.1 \text{ nm}$$

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FIGURE 16



Dansyl doesn't interfere with PP interaction

FIGURE 17

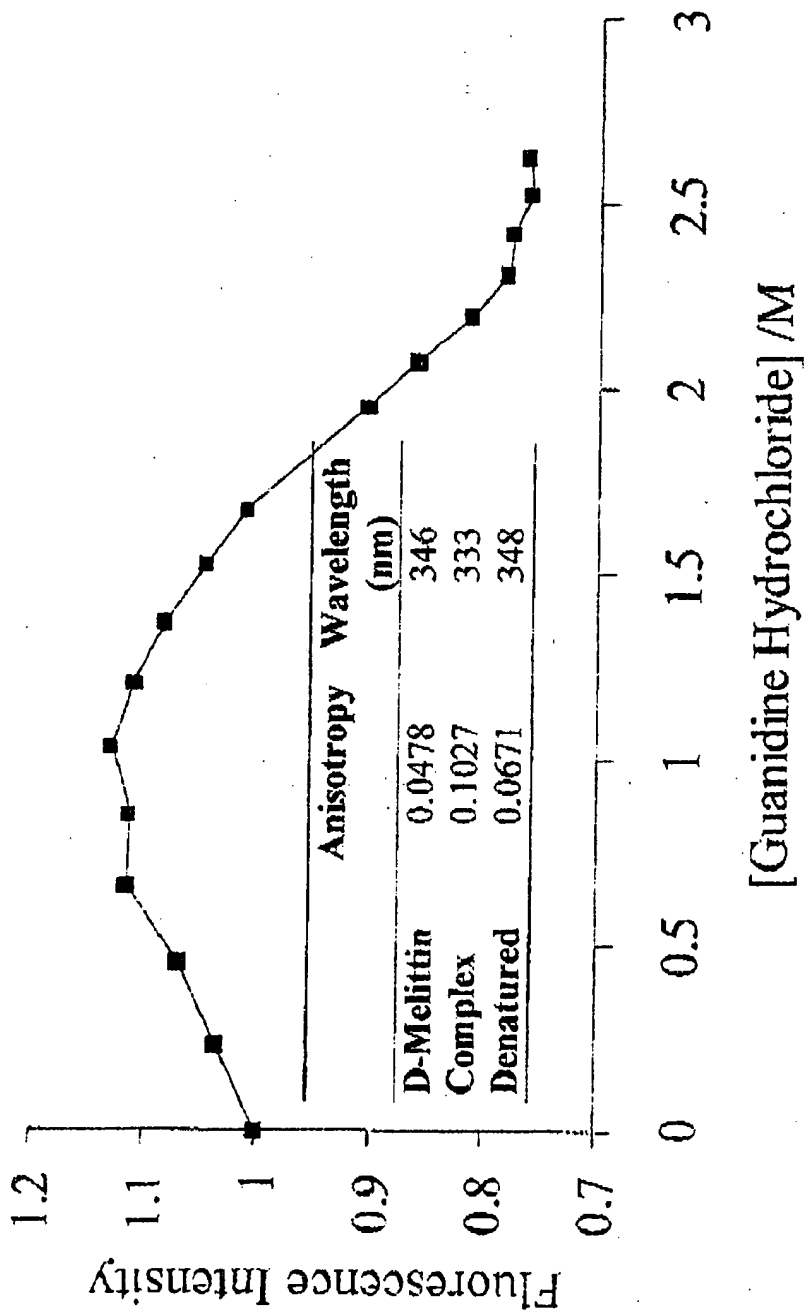
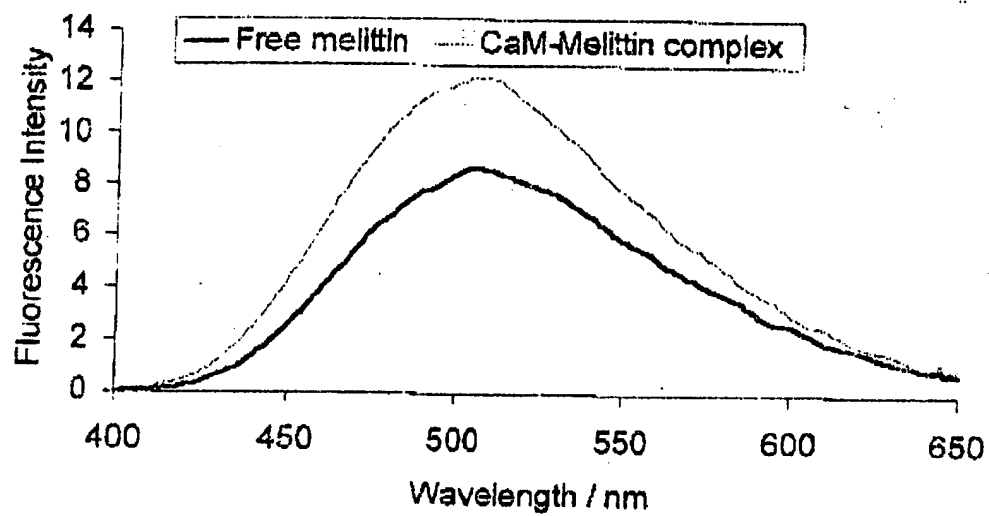
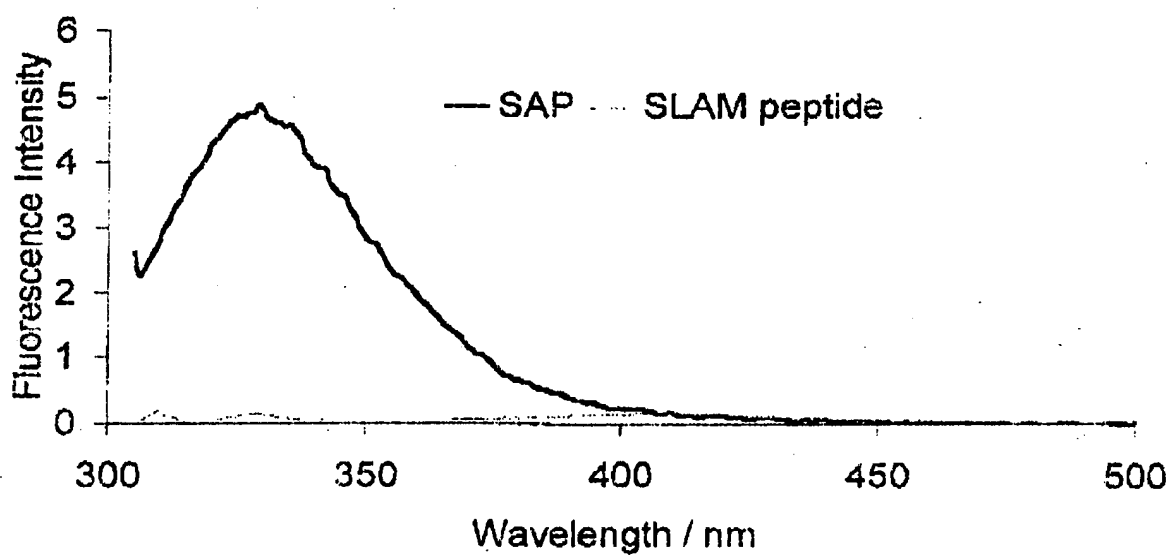


FIGURE 18



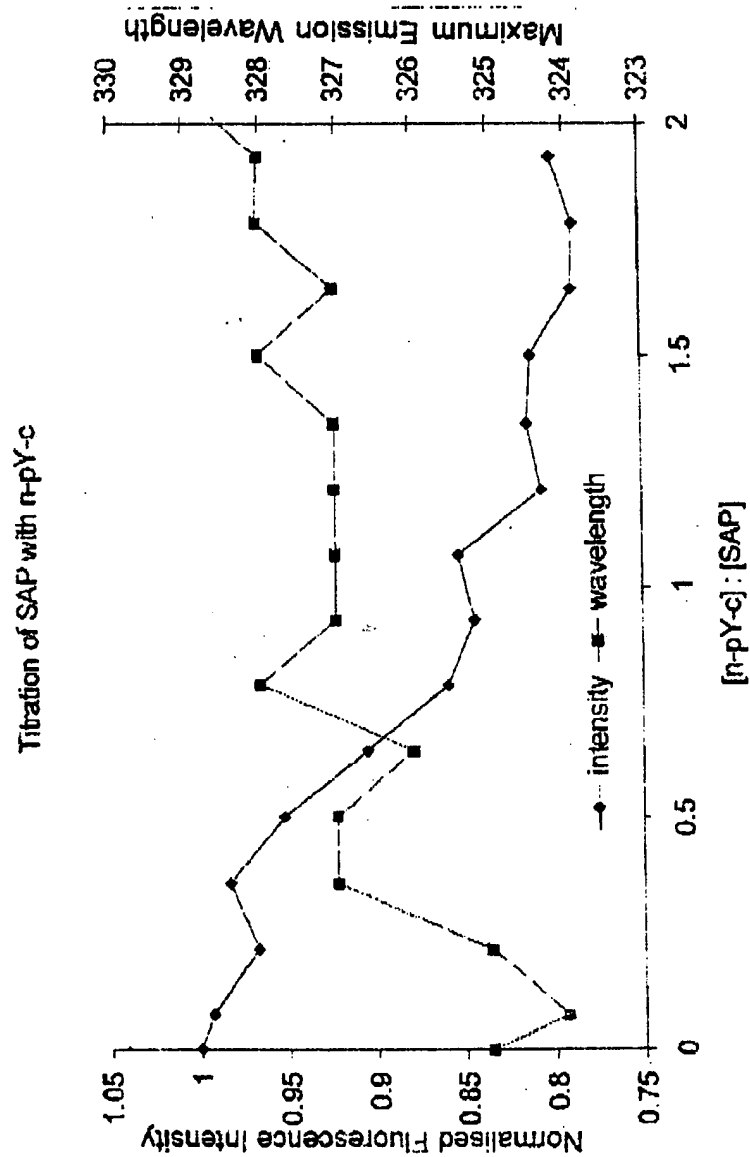
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FIGURE 19

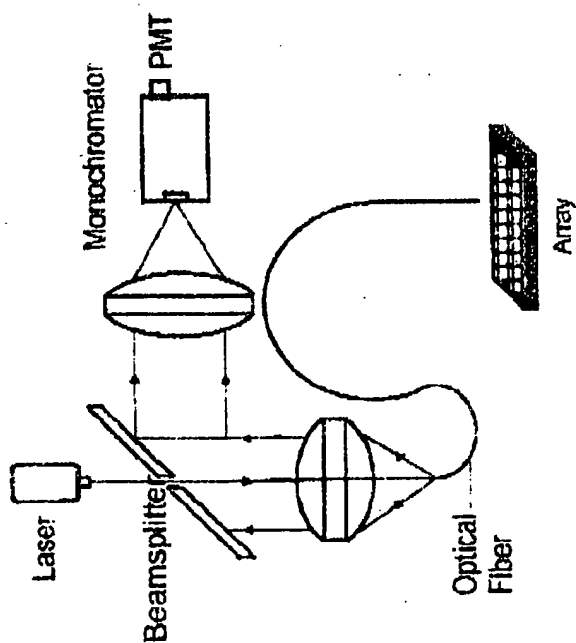
Fluorescence Spectra of SAP and Phosphorylated
SLAM Peptide

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FIGURE 20



A high-contrast, black and white photograph showing a person's legs and feet. The person appears to be wearing a prosthetic or specialized piece of footwear on their right leg. The background is a textured, possibly fabric or paper surface. The image is very dark and grainy, with high contrast between the black and white areas.



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1 2 3 4 5 6

1 2 3 4 5 6 7 8 9

$2 \times 10^{-4} \text{ M}$
 $2 \times 10^{-5} \text{ M}$
 $3 \times 10^{-6} \text{ M}$
 $6 \times 10^{-8} \text{ M}$
 $8 \times 10^{-9} \text{ M}$
 $2 \times 10^{-9} \text{ M}$
 $2 \times 10^{-10} \text{ M}$
 $2 \times 10^{-11} \text{ M}$
 $2 \times 10^{-12} \text{ M}$

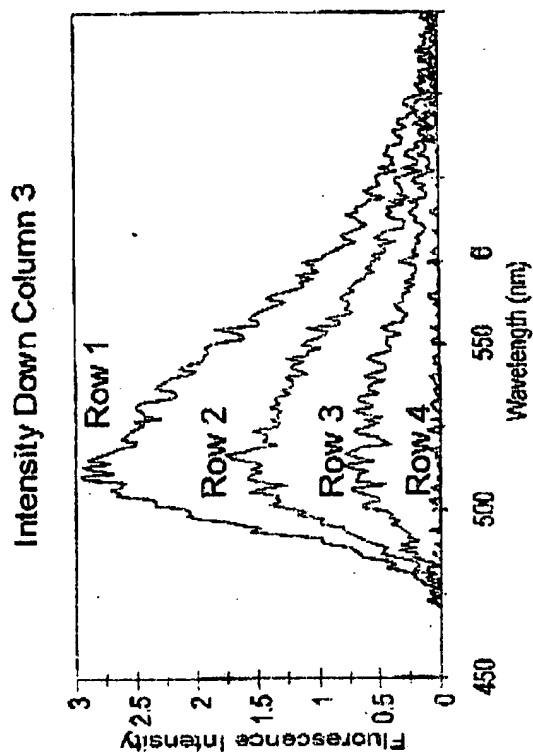
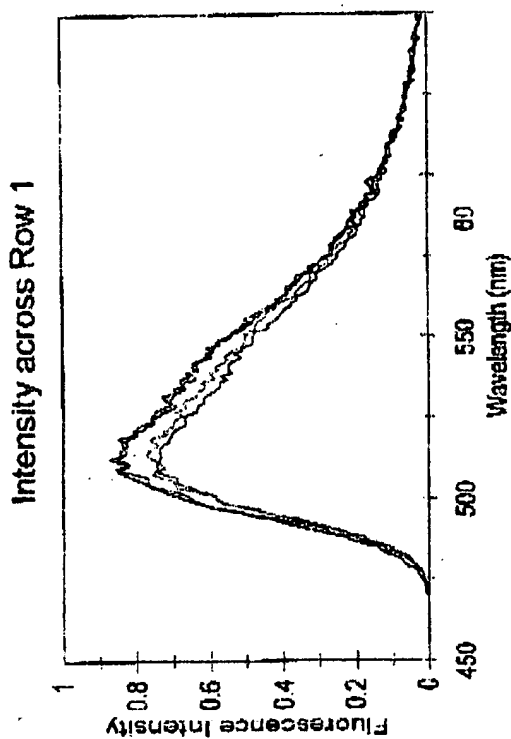


FIGURE 22